

Kara L Bren

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97
papers

3,855
citations

34
h-index

60
g-index

104
ext. papers

4,469
ext. citations

8.3
avg, IF

5.6
L-index

#	Paper	IF	Citations
97	Beyond fossil fuel-driven nitrogen transformations. <i>Science</i> , 2018 , 360,	33.3	772
96	Hydrogen evolution from neutral water under aerobic conditions catalyzed by cobalt microperoxidase-11. <i>Journal of the American Chemical Society</i> , 2014 , 136, 4-7	16.4	195
95	The chemistry and biochemistry of heme c: functional bases for covalent attachment. <i>Natural Product Reports</i> , 2008 , 25, 1118-30	15.1	137
94	The use of pseudocontact shifts to refine solution structures of paramagnetic metalloproteins: Met80Ala cyano-cytochrome c as an example. <i>Journal of Biological Inorganic Chemistry</i> , 1996 , 1, 117-126	3.7	127
93	Solution structure of oxidized <i>Saccharomyces cerevisiae</i> iso-1-cytochrome c. <i>Biochemistry</i> , 1997 , 36, 8992-9001	3.2	120
92	NMR investigation of ferricytochrome c unfolding: detection of an equilibrium unfolding intermediate and residual structure in the denatured state. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2000 , 97, 8312-7	11.5	98
91	The influence of aqueous versus glassy solvents on protein dynamics: vibrational echo experiments and molecular dynamics simulations. <i>Journal of the American Chemical Society</i> , 2005 , 127, 14279-89	16.4	91
90	Three-dimensional solution structure of <i>Saccharomyces cerevisiae</i> reduced iso-1-cytochrome c. <i>Biochemistry</i> , 1996 , 35, 13788-96	3.2	85
89	Structurally engineered cytochromes with unusual ligand-binding properties: expression of <i>Saccharomyces cerevisiae</i> Met-80-->Ala iso-1-cytochrome c. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1993 , 90, 11456-9	11.5	84
88	NMR and DFT investigation of heme ruffling: functional implications for cytochrome c. <i>Journal of the American Chemical Society</i> , 2010 , 132, 9753-63	16.4	79
87	Structurally engineered cytochromes with novel ligand-binding sites: oxy and carbon monoxy derivatives of semisynthetic horse heart Ala80 cytochrome c. <i>Journal of the American Chemical Society</i> , 1993 , 115, 10382-10383	16.4	77
86	The CuA Center of a Soluble Domain from <i>Thermus</i> Cytochrome ba3. An NMR Investigation of the Paramagnetic Protein. <i>Journal of the American Chemical Society</i> , 1996 , 118, 11658-11659	16.4	71
85	Biological significance and applications of heme c proteins and peptides. <i>Accounts of Chemical Research</i> , 2015 , 48, 1845-52	24.3	68
84	Review: studies of ferric heme proteins with highly anisotropic/highly axial low spin ($S = 1/2$) electron paramagnetic resonance signals with bis-histidine and histidine-methionine axial iron coordination. <i>Biopolymers</i> , 2009 , 91, 1064-82	2.2	67
83	Hydrogen Evolution from Water under Aerobic Conditions Catalyzed by a Cobalt ATCUN Metallopeptide. <i>Inorganic Chemistry</i> , 2016 , 55, 1355-7	5.1	64
82	An obligatory intermediate in the folding pathway of cytochrome c552 from <i>Hydrogenobacter thermophilus</i> . <i>Journal of Biological Chemistry</i> , 2005 , 280, 25729-34	5.4	64
81	Three-dimensional solution structure of the cyanide adduct of a Met80Ala variant of <i>Saccharomyces cerevisiae</i> iso-1-cytochrome c. Identification of ligand-residue interactions in the distal heme cavity. <i>Biochemistry</i> , 1995 , 34, 11385-98	3.2	61

80	Investigations of heme distortion, low-frequency vibrational excitations, and electron transfer in cytochrome c. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014 , 111, 6570-5	11.5	59
79	Integrity of thermus thermophilus cytochrome c552 synthesized by Escherichia coli cells expressing the host-specific cytochrome c maturation genes, ccmABCDEFGH: biochemical, spectral, and structural characterization of the recombinant protein. <i>Protein Science</i> , 2000 , 9, 2074-84	6.3	49
78	Discovery of the magnetic behavior of hemoglobin: A beginning of bioinorganic chemistry. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015 , 112, 13123-7	11.5	48
77	Paramagnetic ¹ H NMR Spectroscopy of the Cyanide Derivative of Met80Ala-iso-1-cytochrome c. <i>Journal of the American Chemical Society</i> , 1995 , 117, 8067-8073	16.4	47
76	The proapoptotic G41S mutation to human cytochrome c alters the heme electronic structure and increases the electron self-exchange rate. <i>Journal of the American Chemical Society</i> , 2011 , 133, 1153-5	16.4	46
75	Characterization of Hydrogenobacter thermophilus cytochromes c(552) expressed in the cytoplasm and periplasm of Escherichia coli. <i>Journal of Biological Inorganic Chemistry</i> , 2002 , 7, 260-72	3.7	45
74	Denaturant dependence of equilibrium unfolding intermediates and denatured state structure of horse ferricytochrome c. <i>Journal of Biological Inorganic Chemistry</i> , 2002 , 7, 909-16	3.7	45
73	Solution NMR Study of the Electronic Structure and Magnetic Properties of Cluster Ligation Mutants of the Four-Iron Ferredoxin from the Hyperthermophilic Archaeon Pyrococcus furiosus. <i>Journal of the American Chemical Society</i> , 1997 , 119, 9341-9350	16.4	44
72	Heme axial methionine fluxionality in Hydrogenobacter thermophilus cytochrome c552. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2004 , 101, 8637-42	11.5	43
71	Hydrogen evolution from water catalyzed by cobalt-mimochrome VI*a, a synthetic mini-protein. <i>Chemical Science</i> , 2018 , 9, 8582-8589	9.4	42
70	Semisynthetic and Biomolecular Hydrogen Evolution Catalysts. <i>Inorganic Chemistry</i> , 2016 , 55, 467-77	5.1	39
69	Cobalt Metallopeptide Electrocatalyst for the Selective Reduction of Nitrite to Ammonium. <i>Journal of the American Chemical Society</i> , 2018 , 140, 16888-16892	16.4	38
68	Engineered Enzymes and Bioinspired Catalysts for Energy Conversion. <i>ACS Energy Letters</i> , 2019 , 4, 2168-2180	21.80	36
67	Conformational change and human cytochrome c function: mutation of residue 41 modulates caspase activation and destabilizes Met-80 coordination. <i>Journal of Biological Inorganic Chemistry</i> , 2013 , 18, 289-97	3.7	36
66	Backbone dynamics and hydrogen exchange of Pseudomonas aeruginosa ferricytochrome c(551). <i>Journal of Biological Inorganic Chemistry</i> , 2003 , 8, 156-66	3.7	36
65	pH-dependent equilibria of yeast Met80Ala-iso-1-cytochrome c probed by NMR spectroscopy: a comparison with the wild-type protein. <i>Chemistry and Biology</i> , 1995 , 2, 377-83		36
64	Heme attachment motif mobility tunes cytochrome c redox potential. <i>Biochemistry</i> , 2007 , 46, 11753-60	3.2	35
63	Native and unfolded cytochrome c--comparison of dynamics using 2D-IR vibrational echo spectroscopy. <i>Journal of Physical Chemistry B</i> , 2008 , 112, 10054-63	3.4	34

62	Zinc porphyrin: a fluorescent acceptor in studies of Zn-cytochrome c unfolding by fluorescence resonance energy transfer. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008 , 105, 10779-84	11.5	33
61	Folding, conformational changes, and dynamics of cytochromes C probed by NMR spectroscopy. <i>Inorganic Chemistry</i> , 2004 , 43, 7934-44	5.1	33
60	Comparing substrate specificity between cytochrome c maturation and cytochrome c heme lyase systems for cytochrome c biogenesis. <i>Metallomics</i> , 2011 , 3, 396-403	4.5	31
59	Variation and analysis of second-sphere interactions and axial histidinate character in c-type cytochromes. <i>Inorganic Chemistry</i> , 2010 , 49, 7890-7	5.1	27
58	Zinc porphyrin as a donor for FRET in Zn(II)cytochrome c. <i>Journal of the American Chemical Society</i> , 2010 , 132, 1752-3	16.4	27
57	Heme-protein vibrational couplings in cytochrome c provide a dynamic link that connects the heme-iron and the protein surface. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012 , 109, 8896-900	11.5	27
56	Suppression of axial methionine fluxion in Hydrogenobacter thermophilus Gln64Asn cytochrome c552. <i>Biochemistry</i> , 2005 , 44, 5225-33	3.2	27
55	Modulation of the ligand-field anisotropy in a series of ferric low-spin cytochrome c mutants derived from <i>Pseudomonas aeruginosa</i> cytochrome c-551 and <i>Nitrosomonas europaea</i> cytochrome c-552: a nuclear magnetic resonance and electron paramagnetic resonance study. <i>Journal of the American Chemical Society</i> , 2008 , 130, 15348-60	16.4	26
54	Peptide mimotopes of pneumococcal capsular polysaccharide of 6B serotype: a peptide mimotope can bind to two unrelated antibodies. <i>Journal of Immunology</i> , 2002 , 168, 6273-8	5.3	26
53	Temperature dependent equilibrium native to unfolded protein dynamics and properties observed with IR absorption and 2D IR vibrational echo experiments. <i>Journal of the American Chemical Society</i> , 2011 , 133, 6681-91	16.4	25
52	Redox properties of wild-type and heme-binding loop mutants of bacterial cytochromes C measured by direct electrochemistry. <i>Inorganic Chemistry</i> , 2005 , 44, 8999-9006	5.1	25
51	Extracellular Electron Transfer on Sticky Paper Electrodes: Carbon Paste Paper Anode for Microbial Fuel Cells. <i>ACS Energy Letters</i> , 2016 , 1, 895-898	20.1	24
50	Tuning Mechanism through Buffer Dependence of Hydrogen Evolution Catalyzed by a Cobalt Mini-enzyme. <i>Biochemistry</i> , 2020 , 59, 1289-1297	3.2	22
49	Methionine ligand lability of type I cytochromes c: detection of ligand loss using protein film voltammetry. <i>Journal of the American Chemical Society</i> , 2008 , 130, 6682-3	16.4	22
48	Multidisciplinary approaches to solar hydrogen. <i>Interface Focus</i> , 2015 , 5, 20140091	3.9	21
47	The influence of heme ruffling on spin densities in ferricytochromes c probed by heme core 13C NMR. <i>Inorganic Chemistry</i> , 2013 , 52, 12933-46	5.1	20
46	Modulation of ligand-field parameters by heme ruffling in cytochromes c revealed by EPR spectroscopy. <i>Inorganic Chemistry</i> , 2011 , 50, 12018-24	5.1	20
45	Heme axial methionine fluxion in <i>Pseudomonas aeruginosa</i> Asn64Gln cytochrome c551. <i>Inorganic Chemistry</i> , 2005 , 44, 8587-93	5.1	19

44	Photochemical Hydrogen Evolution from Neutral Water with a Cobalt Metallopeptide Catalyst. <i>Inorganic Chemistry</i> , 2019 , 58, 16402-16410	5.1	19
43	A heme fusion tag for protein affinity purification and quantification. <i>Protein Science</i> , 2010 , 19, 1830-9	6.3	18
42	Cytochrome c552, formed during expression of the truncated, <i>Thermus thermophilus</i> cytochrome c552 gene in the cytoplasm of <i>Escherichia coli</i> , reacts spontaneously to form protein-bound 2-formyl-4-vinyl (Spirographis) heme. <i>Biochemistry</i> , 2004 , 43, 12162-76	3.2	18
41	Effects of heme pocket structure and mobility on cytochrome c stability. <i>Biochemistry</i> , 2007 , 46, 2537-44	3.2	17
40	Cytochrome c552 mutants: structure and dynamics at the active site probed by multidimensional NMR and vibration echo spectroscopy. <i>Journal of Physical Chemistry B</i> , 2006 , 110, 18803-10	3.4	17
39	Recombinant cytochrome c557 obtained from <i>Escherichia coli</i> cells expressing a truncated <i>Thermus thermophilus</i> <i>cycA</i> gene. Heme inversion in an improperly matured protein. <i>Journal of Biological Chemistry</i> , 2001 , 276, 6537-44	5.4	16
38	Light-driven catalysis with engineered enzymes and biomimetic systems. <i>Biotechnology and Applied Biochemistry</i> , 2020 , 67, 463-483	2.8	15
37	Methionine ligand lability in bacterial monoheme cytochromes c: an electrochemical study. <i>Journal of Physical Chemistry B</i> , 2011 , 115, 11718-26	3.4	15
36	Enhancing the activity of photocatalytic hydrogen evolution from CdSe quantum dots with a polyoxovanadate cluster. <i>Chemical Communications</i> , 2020 , 56, 8762-8765	5.8	14
35	Submolecular unfolding units of <i>Pseudomonas aeruginosa</i> cytochrome c-551. <i>Journal of Biological Inorganic Chemistry</i> , 2008 , 13, 837-45	3.7	14
34	Metalloprotein folding. <i>Inorganic Chemistry</i> , 2004 , 43, 7894-6	5.1	13
33	Characterization of recombinant horse cytochrome c synthesized with the assistance of <i>Escherichia coli</i> cytochrome c maturation factors. <i>Biochimica Et Biophysica Acta - Proteins and Proteomics</i> , 2002 , 1601, 215-21	4	13
32	A solution NMR molecular model for the aspartate-ligated, cubane cluster containing ferredoxin from the hyperthermophilic archaeon <i>Pyrococcus furiosus</i> . <i>Biochemistry</i> , 2002 , 41, 12498-508	3.2	13
31	Buffer p Impacts the Mechanism of Hydrogen Evolution Catalyzed by a Cobalt Porphyrin-Peptide. <i>Inorganic Chemistry</i> , 2020 , 59, 8061-8069	5.1	13
30	Going with the Electron Flow: Heme Electronic Structure and Electron Transfer in Cytochrome c. <i>Israel Journal of Chemistry</i> , 2016 , 56, 693-704	3.4	13
29	Locked and loaded for apoptosis. <i>Science</i> , 2017 , 356, 1236	33.3	12
28	Semiconductor nanocrystal photocatalysis for the production of solar fuels. <i>Journal of Chemical Physics</i> , 2021 , 154, 030901	3.9	12
27	Secondary structure extensions in <i>Pyrococcus furiosus</i> ferredoxin destabilize the disulfide bond relative to that in other hyperthermostable ferredoxins. Global consequences for the disulfide orientational heterogeneity. <i>Biochemistry</i> , 1999 , 38, 8167-78	3.2	11

26	Methionine ligand lability of homologous monoheme cytochromes c. <i>Inorganic Chemistry</i> , 2015 , 54, 38-46	5.1	9
25	Cytochrome c heme lyase can mature a fusion peptide composed of the amino-terminal residues of horse cytochrome c. <i>Chemical Communications</i> , 2012 , 48, 8344-6	5.8	9
24	Structural characterization of nitrosomonas europaea cytochrome c-552 variants with marked differences in electronic structure. <i>ChemBioChem</i> , 2013 , 14, 1828-38	3.8	9
23	Influence of heme c attachment on heme conformation and potential. <i>Journal of Biological Inorganic Chemistry</i> , 2018 , 23, 1073-1083	3.7	8
22	Redox state dependence of axial ligand dynamics in Nitrosomonas europaea cytochrome c552. <i>Journal of Physical Chemistry B</i> , 2013 , 117, 15720-8	3.4	8
21	Efficient and Flexible Preparation of Biosynthetic Microperoxidases. <i>Biochemistry</i> , 2017 , 56, 143-148	3.2	7
20	Effects of protein structure on iron-polypeptide vibrational dynamic coupling in cytochrome c. <i>Biochemistry</i> , 2015 , 54, 1064-76	3.2	7
19	Electrocatalytic Multielectron Nitrite Reduction in Water by an Iron Complex. <i>ACS Catalysis</i> , 2020 , 10, 13968-13972	13.1	7
18	Single-Molecule Analysis of Cytochrome Folding by Monitoring the Lifetime of an Attached Fluorescent Probe. <i>Journal of Physical Chemistry Letters</i> , 2013 , 4, 2727-2733	6.4	5
17	Covalent bonding of heme to protein prevents heme capture by nontypeable. <i>FEBS Open Bio</i> , 2017 , 7, 1778-1783	2.7	5
16	NMR Analysis of Spin Densities 2015 , 409-434		5
15	Nuclear Magnetic Resonance (NMR) Spectroscopy of Metallobiomolecules 2011 ,		4
14	Ligand binding to Ala80 cytochrome c.. <i>Journal of Inorganic Biochemistry</i> , 1993 , 51, 111	4.2	4
13	Linear Free Energy Relationships in Hydrogen Evolution Catalysis by a Cobalt Tripeptide in Water. <i>ACS Energy Letters</i> , 2021 , 6, 2256-2261	20.1	4
12	Contributions to cytochrome inner- and outer-sphere reorganization energy. <i>Chemical Science</i> , 2021 , 12, 11894-11913	9.4	4
11	NMR Spectroscopy of Paramagnetic Heme Proteins. <i>Current Inorganic Chemistry</i> , 2012 , 2, 273-291		3
10	Light-driven hydrogen production with CdSe quantum dots and a cobalt glutathione catalyst. <i>Chemical Communications</i> , 2021 , 57, 2053-2056	5.8	3
9	The two redox states of the human NEET proteins[2Fe-2S] clusters. <i>Journal of Biological Inorganic Chemistry</i> , 2021 , 26, 763-774	3.7	3

8	Photoinduced charge separation in single-walled carbon nanotube/protein integrated systems. <i>Nanoscale Horizons</i> , 2017 , 2, 163-166	10.8	2
7	Affinity purification of heme-tagged proteins. <i>Methods in Molecular Biology</i> , 2014 , 1177, 17-33	1.4	2
6	Photochemical hydrogen evolution from cobalt microperoxidase-11. <i>Journal of Inorganic Biochemistry</i> , 2021 , 217, 111384	4.2	2
5	A cobalt mimochrome for photochemical hydrogen evolution from neutral water.. <i>Journal of Inorganic Biochemistry</i> , 2022 , 230, 111753	4.2	1
4	Hydrogen bonding promotes diversity in nitrite coordination modes at a single iron(II) center. <i>Journal of Coordination Chemistry</i> , 2020 , 73, 2664-2676	1.6	1
3	Bioinorganic Chemistry: Show Your Mettle by Meddling with Metals 2011 , 137-154		
2	Using NTHi growth studies to demonstrate the biological significance of c-heme covalent attachment. <i>FASEB Journal</i> , 2012 , 26, 581.1	0.9	
1	Probing the biological significance of c-heme attachment in cytochrome c. <i>FASEB Journal</i> , 2013 , 27, 790.6.9		